ABSTRACT OF THE DISCLOSURE

One or more embodiments of the invention provide for redlining or marking up geographic information on a personal digital assistant (PDA). The PDA provides uploadable, sharable redlining data (created from scribbles on the field). The markup graphics elements include a redline and a text note. The redline is a zero width vector that mimics ink flowing from a stylus, and an associated text note that pops up as a tooltip when the object is selected. The text note provides text blocks, represented on the map as note symbols anchored at a point, and an associated text note that pops up as a tooltip when the object is selected. Any number of these objects can be included in the markup layer of a specific mapset. Each mapset references a single markup layer. Markup layers are stored locally and uploaded (synchronized) with the server automatically when the mapset list is updated. The markup layer, being a component of the mapset's data cache, either remains on the client or is purged with the mapset. If the mapset and associated markup layer stay on the client, subsequent edits may be made to it. These edits are copied up to the server at the next synchronization. Once a mapset leaves the PDA device, markup objects leave with it. When the map is accessed again, the note or redline object may or may not be with it, depending on how this map is handled on the server.